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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,170	03/09/2004	Tsutomu Ogiwara	035576/275605	3493

826 7590 06/20/2006

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EXAMINER

ZEMEL, IRINA SOPJIA

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/796,170	OGIHARA ET AL.	
	Examiner	Art Unit	
	Irina S. Zemel	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/27/05;3/9/04</u> | 6) <input checked="" type="checkbox"/> Other: <u>IDS 3/7/06</u> |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,4965,264 to Hayashi et al., (hereinafter "Hayashi") in combination with US patent 6,020,446 to Okamoto et al., (hereinafter "Okamoto").

Hayashi discloses compositions for forming porous films comprising a condensation product and an organic solvent, the condensation product is obtained by hydrolysis of silane compounds in the presence of basic catalyst. Among suitable basic catalysts tetramethylammonium hydroxide is expressly listed in column 7, line 42. The suitable silane compounds, compounds of formula (10), (20 or (3) AND mixtures thereof are expressly disclosed in the reference. The compounds of formula (1) disclosed in the reference fully correspond to the compounds of formula (1) of the base claims 1 and 7. The compounds of formula (3) of the reference to the extent of substituents on Si being the same overlap in scope with the compounds (2) of the instant claims. Furthermore, functional equivalence of bi-tri-and tetrafunctional silyl crosslinkers or coupling agents (with known and predictable differences in their crosslinking abilities) are

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known in the art as evidenced by, for example, Okamoto (see column 7 for specific examples of functionally equal di and tri silyl). Therefore, use of the claimed crosslinking agents in compositions of Hayashi as, or instead of compound of formula (3) would have been obvious for their known functional equivalence with the expressly disclosed bi-functional crosslinkers in the absence of showing of unexpected results.

The reference further expressly discloses porous films that are obtained from the composition and semiconductor devices that contain the silica-based films obtained from the compositions. See, for example, discussion of the film uses in column 16.

The invention as claimed, thus, is within the purview of the Hayashi reference and, therefore would have been obvious from the disclosure of the reference as discussed above.

The comparative results presented in the specification are noted, however, even if, arguendo, the improvement due to the presence of the compound of formula (2) are unexpected, the showings are only provided for tris-silyl compounds, i.e., when n in the formula is equal to 3, while the compound of formula 4 includes a large number of tetrakis-silyl compounds (n=4) for which no results are shown.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Irina S. Zemel
Primary Examiner
Art Unit 1711



ISZ